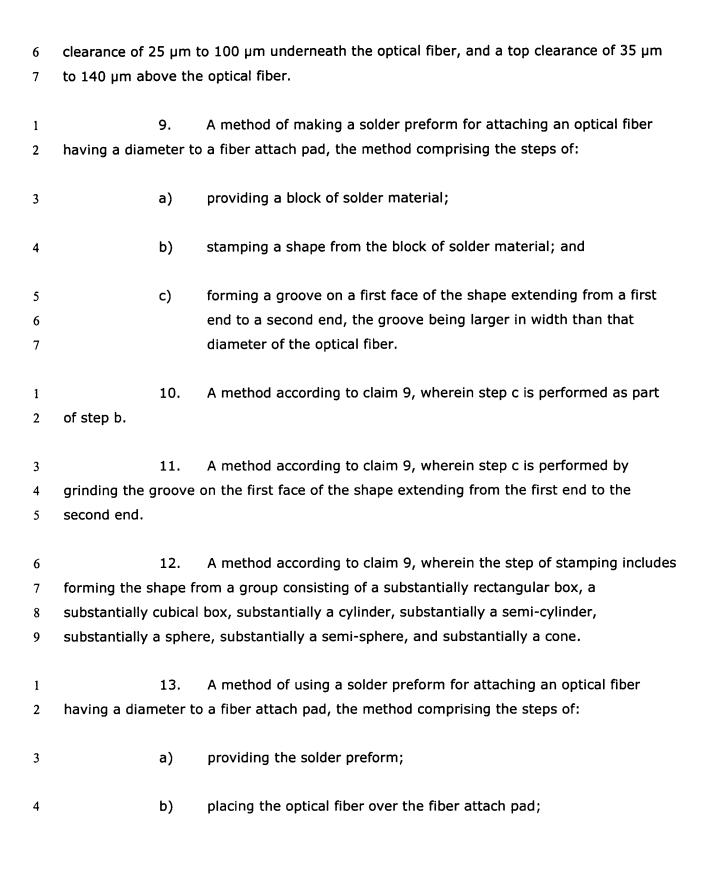
**PATENT** MKPA-107US

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## What is claimed:

- A solder preform for attaching an optical fiber having a diameter to a 1 1. fiber attach pad, the solder preform comprising a body including solder at least on a 2 3 bottom surface thereof, the body having a groove extending along a first face from a first 4 end to a second, the groove being larger in size than the optical fiber to allow alignment of 5 the optical fiber within the groove.
- 2. 1 A solder preform according to claim 1, wherein the height of the groove is larger than the diameter of the optical fiber, allowing a range of clearance above 2 3 and below the optical fiber.
- 1 3. A solder preform according to claim 1, wherein the width of the 2 groove is larger than the diameter of the optical fiber, allowing a range of clearance on at least a side of the optical fiber. 3
- 1 4. A solder preform according to claim 1, wherein the body is formed as 2 a geometric solid with at least one substantially flat face.
- 5. 1 A solder preform according to claim 4, wherein the geometric solid is 2 selected from a group consisting of a rectangular box, a cubical box, a cylinder, a semi-3 cylinder, a semi-sphere, a pyramid, and a cone.
- 1 6. A solder preform according to claim 1, wherein the body is formed 2 from a metallic material.
- 1 7. A solder preform according to claim 1, wherein the body is formed 2 from a glass material.
- 1 8. A solder preform according to claim 1, wherein the body is formed 2 into a substantially rectangular box having a height H as 0.38mm +/- 0.05mm, a groove height GH as 0.26mm to 0.29mm, a width W as 0.5mm to 1.5mm, a groove width GW as 3 4 0.15mm to 0.23mm, and a length L as 0.5mm to 1.5mm, the groove providing 25 µm to 5 105 µm of total clearance between the optical fiber and the width of the groove, a bottom



placing the solder preform over the optical fiber and onto the fiber 5 c) 6 attach pad; and applying laser radiation in a manner such that the optical fiber is 7 d) shielded from the laser radiation by the solder preform. 8 14. The method of claim 13, further comprising the step of aligning the 1 optical fiber to receive a desirable optimized optical signal strength from an adjacent 2 optical component. 3 15. The method of claim 13, further comprising the step of aligning the 1 optical fiber to provide a desirable optimized optical signal strength to an adjacent optical 2 3 component.